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Some Experiments on the Reproduction of Folk-Stories

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I. INTRODUCTION.

WHEN a story is passed on from one person to another, each man repeating, as he imagines, what he has heard from the last narrator, it undergoes many successive changes before it at length arrives at that relatively fixed form in which it may become current throughout a whole community. To discover the principles according to which successive versions in such a process of change may be traced, presents problems of considerable interest, both for psychology and for sociology. Moreover, precisely the same type of problems confront investigators who endeavour to study the diffusion of decorative and representative art forms, of music, of social customs, institutions, and beliefs, and in fact, of almost every element which enters into the varied and complex life of man in society.

One possible line of approach to the study of these problems is by way of psychological experiment. No doubt many of the most potent influences which help to determine the nature and direction of conventionalisation in daily life are definitely social in origin. And such influences are not clearly brought out by the type of experiment the results of which I propose to discuss in the present paper. In these experiments subjects effected their reproduction of the presented material rather as isolated individuals [31] than definitely as members of a group. Nevertheless, as the results show, the reproductions themselves illustrate the operation of principles which undoubtedly help to determine the direction and character of conventionalisation as it occurs in everyday experience. And it cannot be forgotten that in none of his reactions is the individual wholly free from influences due immediately to his place in a community.

It often happens that a folk-story which has been developed in a certain social group gets passed on to another which possesses different habits of life and thought, different social institutions, customs, beliefs, and belongs to a widely divergent level of development. Thereupon A, repeating the story to B, involuntarily introduces slight changes, perhaps replacing the name of an object which, he has rarely or never seen by that of some other object with which he is familiar. B carries on the same process, and in this manner, by means of a number of alterations, many of them apparently trivial in nature, the material is gradually reduced to a relatively fixed form which, congenial to its new environment, bears only what may be called a "family likeness" to the story as found in the other community. It is then highly probable that, owing to the striking divergences of the two versions, it will be denied that one could ever have been derived from the other, and a theory of their independent origin will be put forward.

In any attempt experimentally to investigate the problems thus arising, three ways in which change may be induced call for separate study. First, there are those changes which a single individual tends to reproduce by reason of repeated reproductions. Second, there are the results of the numerous successive changes introduced when a series of reproductions are obtained from different individuals, each person operating upon the reproduction of his immediate predecessor in the series. Third, there are the types of change which may be observed when these [32] two ways of obtaining reproductions are mixed, and interchange of

material under known conditions is effected. The present paper will deal briefly with results obtained from an application of the first two methods only.

The material chiefly employed in those experiments which are here to be described, consisted of folk-stories, developed in a community very different from that to which my subjects belonged, and containing striking, curious, and often unfamiliar incidents and names. Picture material was also given to be reproduced, care being taken that the mere drawing of the pictures employed presented no great difficulty. Subjects read the stories over twice to themselves at their own normal reading pace. The pictures were studied for a period of four minutes. First reproductions were in all instances begun fifteen minutes after the original study of the material. In cases where a subject gave repeated reproductions, no reference was allowed to the original, or to his own earlier renderings, in any of the tests following upon the first. Detailed analysis and discussion of the results are impossible within the limits of this paper, but will be published later.

2. REPEATED REPRODUCTION BY THE SAME INDIVIDUAL.

The results under this head will be very briefly summarised: --

(a) The repeated reproduction of stories by the same individual revealed definite widespread tendencies toward change. These were largely dependent upon typical differences in the use of the various types of cue upon which reproductions may depend. Many subjects rely chiefly, for the details of their remembering, upon the use of words. In such cases the most important determining factors in the reproductions were the length and style of the original, together with the actual construction of the phrases. A subject of this class will often preserve some peculiar turn of phrase intact, even when incidents much more [33] intrinsically important in a story are distorted. This preservation of the phrase is one illustration of a very common and important principle that may provisionally be called "the persistence of the trivial."

(b) In repeated reproduction a subject's own earlier versions gain an increasingly important influence as time elapses. Upon its first presentation a story or picture is considered from a certain point of view, or under the influence of a certain attitude. This attitude not only, persists, but usually plays a greater part with the lapse of time. To this, no doubt, is due the fact that inventions and transformations, once introduced, show great tenacity, and tend to be formed into related series. In a similar manner, an invention once introduced may easily bring about changes in material which has, up to this point, been correctly reported.

(c) As a general rule, visual imagery tends to become more active the longer the interval preceding reproduction, and, at least in the case of stories containing the report of a number of incidents, increased visualisation provides conditions which favour transformation.

(d) Relations of opposition, similarity, subjection, and the like, occurring in the original, are very commonly intensified. This forms one illustration of a deep-rooted and widespread tendency to dramatisation, and, in particular, all those types of relation about the apprehension of which feeling tends to cluster are readily exaggerated or emphasised.

(e) One of the most important of the general factors inducing transformation in repeated reproduction is the effort to rationalise. This is very prominent in serial reproduction also, and will be defined and considered later. Each of these factors might be further discussed and illustrated, but as I desire at present to lay chief emphasis upon the results obtained from serial reproduction, I shall proceed at once to discuss the latter. [34]

3. SERIAL REPRODUCTION.

First we will consider omissions, of which there were many in every series.

Each event, or incident, in a narration, possesses a certain potency of reproduction. To borrow terms used by Thorndike of words in a sentence, the incident, or event, may be under potent, or just normally potent, or over potent (1). The under potent is omitted; the normally potent is reproduced; the over potent is not only reproduced, but may so dominate all the rest as to change the whole course of the narration.

Now so far as my observation goes, the under potent falls into one of three classes. First there is omission of the irrelevant, then omission of the unfamiliar, and then omission of the unpleasant.

Irrelevant is a term most often used in a certain kind of logic. Any constituent of a chain of argument which does not logically aid in establishing the validity of an argument is called irrelevant. But here the term must be used in a wider sense. Psychologically, everything is irrelevant which to the observer concerned does not appear fitting, or in place. And what does appear fitting, or in place, is determined by social environment and training, as well as by individual temperament and education. To most of the members of a modern civilised community, for example, the relevant and the irrelevant are almost wholly concerned with connexions between facts, events, words, or arguments, and not merely with the character in itself of these elements. In a phantasy practically any sort of connexion is enough to secure relevance, but clearly this is not so in the argument, or in the straightforward narrative. More and more, however, as we approach the primitive attitude, we cease to determine what is relevant by considering how the members of a series are related to a central aim or topic. We [35] tend to arrive at that type of the relevant in which, apart from any elaboration whatever, material is merely accepted at once as being fitting or satisfactory. All of the stories used in these experiments were developed in relatively primitive communities. The type of connexion between incident and incident was in the main merely temporal. It is not, of course, that the tales had no centre of emphasis, but that the latter was, from the point of view of a modern reader, often obscured, and that events appeared to be strung together haphazard, just as they happened to suggest themselves to the mind of the narrator. These stories were reproduced by subjects who were either students or teachers at a University. Gradually the tales came to acquire some central character, which occupied the focus of attention, and everything not rationally leading up to this point was omitted. In a story entitled *The War of the Ghosts* (2), for example, ghosts appear as a mere temporal incident in a somewhat inconsecutive original narration, and are beyond doubt meant to occupy a central position in the story. But the point of emphasis was by no means apparent to my readers. In every one of the series of reproductions all mention of ghosts drops out almost immediately, and this in spite of the fact that ghosts appear in the original title. To my subjects they afforded an illustration of an incident not capable of being regarded as explaining itself, and at the same time not explicitly connected by any assigned reason with the main thread of the story. Consequently they disappeared.

Clearly it is a matter of no small importance to be able, taking any given level of social development, to state what are the main influences which determine the rejection of transmitted material as irrelevant, and how such influences work. But the study is of too great complexity to be entered upon here. [36]

Omission of the unfamiliar is also frequent. It differs from omission of the irrelevant, in that it has nothing whatever to do, of necessity, with connexions between parts of presented material. This becomes the more clear upon the consideration that when incidents, objects, or events unfamiliar in themselves, are nevertheless related to anything that is familiar, what frequently occurs is not omission but transformation. A special case is where that which is unfamiliar in itself is rendered familiar by its content. It is then frequently preserved, but transformed. Thus in my reproductions, "boats" invariably sooner or later replaced "canoes," and "rowing" replaced "paddling"; a "bush-cat" became an ordinary "cat," and "pea-nut" was transformed into "acorn." It is in this type of change that the direct influence of social and environmental factors is probably the strongest.

Omission, of the unpleasant was very frequently illustrated. This needs little emphasis, as the principle is now

well established. Several of the stories used were chosen purposely because they contained modes of speech, or reports of incidents somewhat opposed to modern conventions. Such modes of speech, and such relatively shocking incidents, always tended to disappear. This also was very marked when, in repeated reproduction, the intervals were extended. The material simply disappeared from the reproduction, leaving the subject entirely unaware that anything had dropped out. There is more than, a little suggestion that material thus omitted may still have continued to exercise some influence in giving a new twist to the reproductions. Such functioning of factors from the unconscious is of particular interest in view of the development of contemporary psychology.

When we turn from omissions to transformations we find, that here, also, the influence of three broad principles of change is evident. The first may be called the principle [37] of familiarisation, the second that of rationalisation, and the third that of dominance.

It will be convenient to consider the first two together. Both familiarisation and rationalisation are, in fact, results of a common tendency to change all presented material into such a form that it may be accepted without uneasiness, and without question. The influence of this tendency is exerted upon absolutely all material which is received into and preserved within a mental system. Sometimes the effect is that specific reasons are evolved to account for the form of given material; sometimes, even when such reasons are lacking, the form of the material is changed into something which can be readily accepted simply because it is familiar. In both cases the result in terms of psychological attitude is the same, and a pleasant mood of unquestioning acceptance is evoked.

It is obvious that the operation of the principle of familiarisation will give rise to strikingly different changes at different levels of social development, and in varying environments. For the most part, my stories, in their original form, consisted of reports of occurrences which could, within the community in which the tales were current, be accepted without explanation.

In *The War of the Ghosts*, for example, two young Indians are seal hunting, when they are accosted by warriors from a canoe, who ask them to help in a fight which is about to take place. One of the Indians agrees, and goes with them. In the fight he hears somebody say: "That young Indian has been hit," but he feels no hurt. He merely remarks casually: "Oh, they are ghosts." He goes back home, tells his friends, lights a fire, and the next morning at sunrise falls down: "something black came from his mouth. He was dead."

Now in the original narration, although it is not put forward specifically as a reason, the casual "they are ghosts" serves as a rationalising factor throughout the [38] whole story. With this inserted, all the rest is satisfactory. But I have already shown how all mention of the ghosts dropped out of my reproductions. This leaves the two awkward and disconnected incidents of the painless wound and the strange death. It is interesting to pursue the adventures of these two incidents throughout the stories. I take one chain of reproductions only. In the original the painless wound incident is related thus :

"Presently the young man heard one of the warriors say: 'Quick, that young Indian has been hit.' Now he thought, 'Oh, they are ghosts.' He did not feel sick, but they said he had been shot.

"So the canoes went back to 'Egulac, and the young man went ashore to his house, and made a fire."

The first reproduction runs:

Then one of the warriors called to the young Indian and said: "Go back to the canoe, for you are wounded 'by an arrow." But 'the Indian wondered, for he felt not sick.

And when many had fallen on either side, they went back to the canoes, and down the river again, and so the young Indian came back to Egulac.

Next comes:

Then one of the warriors called out to the young indian : "Go back home now for you are wounded."

"No that is not so, for I feel no pain."

But the warrior sent him back to the canoe, for he had been wounded by an arrow, though he could not be convinced of it, for he felt not sick.

Then :

At last the warrior said to the young Indian: "Go home, for you are wounded." But the Indian replied: "Nay, that cannot be, for I feel no pain." Still the warrior urged him, and he returned to Egulac. [39]

Then:

'And the young man fell, pierced through the heart by an arrow. And he said to the warrior: "Take me back to Malagua, for that is my home." So the warrior brought him back.

Then:

Presently the young man fell wounded, with an arrow through his heart. "Take me to Malagua," he said to the warrior, for 'my' home is there." Then the warrior brought him to Malagua '

Then:

During the fight the young man fell wounded, with an arrow through his heart. Thea he said to the warrior: "Take me back to Momapan; that is where I live." So he took the young man back to his home.

Then:

In the course of the battle the Indian was mortally wounded. " Take me home," he said, "to Momapan. That is, where I come from. I, am, going to die." "Oh no," said the warrior, to whom he made his request, "you will live."

Then:

In the course of the fight farther on the Indian was mortally wounded, 'and his spirit fled. "Take me to 'my home," he said, " at Momapan, for I am going to die." "No, you will not die," :said a warrior. Then: In the fight farther on he was mortally.wounded, so that his spirit fled. "I am going to die," he said. "Take me back to Mombapan." "You are not going to die," said the warrior.

Thus in a short series of nine reproductions the incident of the painless wound has been entirely transformed. The process of transformation may be readily traced. All reference to ghosts drops out of the very first reproduction, the title also disappearing, and this leaves the incident entirely "in the air," and unexplained. Together with [40] this omission, and certainly connected with it, is the new statement that the Indian has been wounded by an, arrow. That is to say, a real, flesh wound is implied. The arrow is, in fact, transferred to this incident from another part of the story a type of change which very frequently occurs but it serves the

purpose of making the wound appear less mysterious. The next reproduction remains much the same, save that a more dramatic form is adopted, but the arrow then drops out, and the Indian is simply said to be "sore wounded." This immediately changes into the statement that the Indian was "pierced through the heart by an arrow," the weapon coming back in again. Just as before. Moreover, it appears natural for the wounded man 'himself' to ask to be taken home. It is still odd, however, that the Indian should carry on a conversation after being shot through the heart, and soon he becomes merely "mortally wounded." In this form the narrative of the wound remains to the end in a form, that is, denuded of all mysterious elements, and able to be accepted as satisfactory by my subjects. At the beginning of the series; every person said that the whole business of the wound bothered him very much. At the end the narrative was simply taken without question. At no point in the whole series of changes did any actual specification of reasons occur, but all the time a gradual process was going on in the direction of familiarisation.

The death scene provides a yet more interesting series of changes. The original states: "When the sun rose, he (i.e. the Indian) fell down. Something black came out of his mouth. His face became contorted. The people jumped up and cried. He was dead."

Here are the series of reproductions:

I.

It was near daybreak when he became weak, and when the sun rose he fell down. And he gave a cry, and as he opened his [41] mouth a black thing rushed from it. Then they ran to pick him up, wondering. But when they spoke he answered not. He was dead.

There is considerable elaboration here, but the most interesting change is the transformation of the vague "something black" into the concrete "a black thing."

II.

When the sun rose he suddenly felt faint, and when he would have risen he fell down, and black thing rushed out of his mouth. And when the people went to him, and spoke to him, and would have raised him, he answered not, for he was dead.

This remains much the same, but, the phrase telling that the people "would have raised him" had curious results. It must also be noticed that the death is now brought in definitely as a reason for the wounded man's silence at the end of the story.

III.

He felt no pain until sunrise the next day, when, on trying to rise, a great black thing, flew out of his mouth; and when his people approached him to raise him, they could not, for he was dead.

Here comes a very significant change, for the "something black" has become a "great black thing" which flew out of his mouth. The black 'thing' gave to this subject a suggestion of a soul passing from a dead body, and it was due chiefly to this that "rushed out" was 'replaced' by "flew out." An important step has been taken in a process of familiarisation based upon the principle, of assimilation to known beliefs. Here for the first time the 'people are said to be unable to raise the dead body because it was dead.

IV.

At sunset 'his soul fled black from- his mouth, and he grew stark and stiff. And when they came to lift him they could not, for he was dead. [42]

Here the young man dies at sunset in conformity with common convention. The subject was, in fact, vaguely reminded of certain familiar myths. He remembered that it is often considered fitting that a man should die as the sun goes down, while as regards the final transformation, he remarked: "I was thinking of the Greek myth, and visualised a picture in which the soul is flying from a dying man's mouth."

V.

At sunset his soul fled black from his mouth, and his body grew cold and stiff. Then they came and tried to lift him, but could not, for he was dead. This version is practically identical with the preceding one, but in the next a yet more commonplace record is produced.

VI.

He died at Sunset, and his soul passed out from' his mouth. They tried to lift him up, but could not, for he was dead.

The "black thing" is now entirely superseded by the idea of the passage of the soul.

VII.

Before the boat got clear of the conflict the Indian died, and his spirit fled. They stopped the boat and tried to lift him out, but could not, for he was dead.

Here a further troublesome element has disappeared. In spite of the desperate nature of his wound, the Indian has, up to this point, lived for a long time. But that he should do so had been a source of worry to, all my subjects. In this version the wounded man at length, quite naturally, dies immediately. The very common and conventional phrase: "his spirit fled" is employed, and the idea of a material soul also disappears.

VIII.

Before he could be carried back to the boat his spirit fled, and left this world.

An immediate death is now finally secured. Moreover, the incident of the corpse which could not be lifted is at last entirely transformed. The curiously long persistence of the latter incident affords a good illustration of what has already been provisionally referred to as "persistence of the trivial," or of the relatively novel, or meaningless. Sometimes a very unusual and out-of-the-way detail serves as an identification mark in a story, and as such it tends to reappear unchanged in many versions. In this particular case the omission is effected in a common and extremely, interesting manner by a blending. Instead of being unable to lift the body, the people are merely baulked in their attempt to get it to the boat before the man dies. The effect of the change is that both the death 'and the curious final incident are rendered more commonplace, and in that sense familiarised.

IX.

He died, and his spirit left the world.

The transformation is now complete, and the result is a brief statement which my subjects accepted at once as not calling for any explanation.

Rationalisation proper, in the sense of the definite provision of explicit reasons was constantly illustrated. Words such as "therefore," "for," and "because," were frequently inserted where they had been absent from the original. A particularly interesting, type of rationalisation was the tendency of the tales to acquire a moral. This occurred on several occasions, and is well illustrated 'by a comparison of the original with the final versions of another of the stories used. The story in question came from [44] Central Africa, and may be called: "*The Son who tried to Outwit his Father.*" The first version runs thus (3):

A son said to his father one day: " I will hide, and you will not be able to find me." The father replied: "Hide wherever you like," and he went into the house to rest. The son saw a three-kernel pea-nut, and changed himself into one of the kernels; a fowl coming along picked up the pea-nut, and swallowed it; a wild bush-cat caught and ate the fowl; , and a dog met and chased and ate the bush-cat. After a little time the dog was swallowed by a python, that, having eaten its meal, went to the river, and was snared in a fish-trap.

The father searched for his son, and not seeing him, went to look at the fish-trap. On pulling it to the riverside, he found a large python in it. He opened it, and saw a dog inside, in which she found a bush-cat, and on opening that he discovered a fowl, from which he took the pea-nut, and breaking the shell, he then revealed his son. The son was so dumbfounded that he never again tried to outwit his father.

In the course of twenty reproductions this quite straight forward narrative became:

A small boy, having got into some kind of mischief, wished to hide himself from his father. He happened to be standing under a tree when an acorn fell to the ground, and he immediately determined to hide himself within it. He accordingly concealed himself within the kernel. Now a cat chanced to be passing along that way, and when she saw the acorn .she forthwith swallowed it. Not long afterwards a dog killed and ate the cat: Finally the dog himself was devoured by a python.

The father of the boy was out hunting one day, when he thet the python, and attacked and slew it. On cutting the beast open, he discovered the dog inside it, and inside the dog the cat, and inside 'the cat the acorn. Within the acorn he discovered his long-lost son. The son was overjoyed on seeing his father once more, and promised him that' he would never again conceal anything from him. He said he would submit to the punishment he deserved, whatever his. crime might be.

Thus, the story of an ingenious youth has become that of a naughty little boy, deservedly punished, and with this change has gone a complete reversal of the son's attitude. Instead of being "dumbfounded" at his discovery, ashe is to begin with, the boy, is overjoyed and suitably penitent. The gradual process by which this end was secured cannot now be analysed, but there is, no doubt that the acquisition by the story of a moral flavour produced in my subjects a feeling of fitness and rightness which justifies its being treated as a case of transformation by rationalisation. Other illustrations of the same tendency might readily be given.

The third principle of transformation noted was, that of dominance. This occurs whenever some word, phrase, or event so stahds out from the rest of the narrative as to exercise a definite and general transforming influence. A careful consideration and analysis of the conditions of dominance makes it clear that among them affective factors are of prime importance. Moreover these affective & actors are generally either of only slightly unpleasant, or else definitely of a pleasant character. The common dominance of "stock" words and phrases; of words and phrases evoking lively visual imagery; of words and phrases having a pleasant sound; of words and phrases recalling some personal experience, and of words which, in rhythmic writing, carry the stress, all come under this general head.

A very interesting case is where the dominant incident or character is extremely unusual, and even,

apparently, relatively meaningless. The illustration already given of the transformation of the death scene from *The War of the Ghosts* has already shown how an inherently absurd element may yet persist unchanged for a long time. This would seem to occur often in the reproduction of picture forms, and I have had several most striking illustrations of how some seemingly absurd detail may be, faithfully reproduced, and may exercise a transforming influence that seems altogether out of proportion to its importance. At least one conclusion of practical value may be drawn from this. In any attempt to determine the affiliations of versions of stories, or of pictured representations, apparently trivial details may often deserve the greatest attention.

When, how, and why this should be so are questions with which I hope to deal in detail on some future occasion. But, in order to prevent misunderstanding, a few additional remarks must now be made. I have spoken provisionally of a principle of persistence of the trivial. Very often details which appear to be trivial to any persons not engaged in the reproductions, are really far from trivial to those who have produced the versions in question. This gives a first broad distinction between what may be called the subjectively trivial and the objectively trivial. We then get three classes of cases: first that of the persistence of detail which is objectively trivial, but subjectively significant, the significance being clear to the subject at the time at which he produces his reproduction; second, that which is objectively trivial, but subjectively significant, the significance being entirely hidden from the subject at the time at which he makes the reproduction; and third, that which is both objectively and subjectively trivial, but which nevertheless persists. These three cases, and their conditions, have to be very carefully distinguished, and I shall hope to be able to show how particularly important each of the last two classes of cases may be.

Another extremely common type of change which does not appear to be capable of being brought under any of the general principles so far discussed is that of transposition. This takes many different forms. There may be duplication, in which case a detail is not only introduced into a wrong position, but is also retained in its right position. More commonly it is omitted from its proper place, and then it may either be transferred bodily to some new position, or else it may itself suffer change, being mingled, by a process of condensation, with that part of the whole to which it is transferred. This is what occurred in the course of the transformation of the proper name Egulac to Mombapan (4) in *The War of the Ghosts*, and a further illustration has already been given in the fusion of the death and the body-lifting incidents from the same tale. Again, transposition may simply take the form of a reversal of the parts played by different persons. In *The War of the Ghosts* first the wounded man is *told* to go home and then later he himself *begs* to be taken home; first the young Indian declares his own conviction that he will live, but later he has the declaration taken from him by the warrior. There are many different modes and conditions of transposition, all of which may be illustrated clearly by means of experiments of the kind which I have here reported. It is highly desirable that this experimentation should be carried out, because changes by transposition very frequently indeed mark turning points in the history of the conventionalisation of narrative material.

By a more extended discussion it would be possible to bring, to light additional principles and modes of change. But enough has been said to show that, by the application of the methods here proposed, illuminating information may be obtained, with respect to the character and conditions of the changes undergone by material in process of conventionalisation.

Endnotes:

(1) *Psychological Review*, 1917, xxiv, pp.220-34.

(2) This story was slightly adapted from a translation by Franz Boas, *Bureau of American Ethnology*, Bulletin 26, pp. 182-4.

(3) *Congo Life and Folklore*, by J. H. Weeks, London, 1911, p. 462.

(4) In the original the two place-names are Egulac and Kalama. In the third reproduction these become Malagua and Komama. Malagua was thought to be "probably a compound of the two names," and in fact obviously contains constituents of both. Two reproductions later the dominant "o" of Komama is transferred, and with it the effect of the repetition of the "m." Malagua becomes Momapan, and Komama entirely disappears.

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